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Manual  
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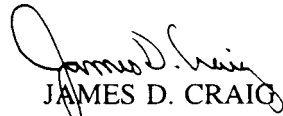
**Engineering and Design**  
**STRUCTURAL DESIGN OF CONCRETE LINED**  
**FLOOD CONTROL CHANNELS**

**1. Purpose.** This manual provides guidance for the design of reinforced, concrete lined flood control channels which convey rapid and tranquil storm water flows to prevent flooding. This guidance presents provisions for coordinating the disciplines involved in the design of channels, selecting channel type, and identifying the critical aspects of designs which require quality assurance inspection during construction. Channel design involves determining the overall channel configuration including appurtenant structures, designing reinforced concrete structures and pavement or concrete lining, determining type and location of joints, designing subdrainage systems, and designing appropriate safety features.

**2. Scope.** This guidance addresses trapezoidal and rectangular flood control channels lined with reinforced concrete. Guidance is not included for the design of channel linings formed by gabions, riprap, shotcrete, gunite, or grouted mattresses.

**3. Applicability.** This guidance applies to all HQUSACE elements, major subordinate commands, districts, laboratories, and field operating activities having civil works responsibilities.

FOR THE COMMANDER:

  
JAMES D. CRAIG  
Colonel, Corps of Engineers  
Chief of Staff